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An Architectural Garden.

THE location of the house of Mr. E. C. Benedict, on the Indian Harbor property, is certainly one of the finest on Long Island Sound. The old Indian Harbor Hotel (once known as the Americus Club, of Tammany fame) was built on this point some years ago, and was still standing when the present work was begun. This beautiful point of land, almost entirely surrounded by water (on the west side by a landlocked harbor), and rising as it projects toward the water, so that the point on which the house is situated is the highest point of the site, is exceptional. It is covered with beautiful wild woods in a good state of preservation (see plan on page 243).

The site of the old hotel was adopted for the present house because of its height and proximity to the water, its beautiful outlook, and also because this portion of the land, being very rocky, is less wooded and needed architectural treatment. The materials used in the main construction of the building are either stone or brick, covered with a stucco composed of cement and marble dust. The roofs, where apparent, are covered with red Italian tiles, while the architecture and landscape work are somewhat Italian in character.

At the entrance, a stone lodge, somewhat picturesque in its treatment, and stone walls across the point, with wrought-iron gates, are built among the Oak-trees in such a way as to harmonize with the natural beauty of the spot. After passing the lodge, a drive of about an eighth of a mile through absolutely wild woods leads gradually to the architectural features of the house and its surroundings, a few flowering bushes in groups being the first indication of cultivation. At the point where the different roads to the stable, service house, docks, etc., meet, a semicircular stone bench and wall are built, beyond which avenues of symmetrically planted trees lead through the natural woods to a formal entrance with stone walls and grilles. Beyond the grille, a broad and formal avenue, with six rows of trees symmetrically planted, leads through a formal landscape to the inclined drive or ramp, and to the flight of stone steps, both of which lead directly to the porte cochère. The house is at the apex of the property and also of the general composition.

The formal landscape is thus treated as a gradual transition or introduction between the perfectly natural woods and the absolutely formal portion of the composition—the house and terraces immediately surrounding it, with ramps and staircases, etc. This principle of general treatment in landscape prevails in all the fine works of Europe and other parts of the world. In Versailles, for instance, the Château on the town side is treated with an entirely formal paved court, a theatre forming one wing of the court, a chapel the other, an elaborate entrance, grilles and walls enclosing it on the fourth side. The other façade of the Château faces beautiful parks, terraces and fountains, the axis of the Château being an extended vista, so that the eye glances first over entirely formal surroundings, and gradually, through a less formal garden, until it reaches the natural landscape beyond.

This effect has been sought on the land side of Mr. Benedict's house, though, of course, in a very much less ambitious and extensive way, owing to the limitations of the site. On the water side, the terraces, with overhanging balconies and balustrades and stone walls, have been treated so as to follow the outlines of the rocks and to lead gradually from the architectural to the natural, the immediate surroundings of the house being formal terraces and terrace gardens. When approaching the house, whether from the land side or from the water side, the transition from the natural to the artificial is gradual, and in itself natural, the whole landscape forming a beautiful foreground or frame for the crowning feature—the architecture. When looked at from the house the treatment forms a foreground, leading gradually to the natural, and at the same time framing the landscape.

The treatment, in detail, comprises the main house, which is L-shaped, the hollow of the L being south and east, which gives not only the most beautiful outlook, but also the best exposure for sunlight and cool breezes. The treatment of the gardens within the terraces is formal, with hedges, flowering plants, gravel paths, balustrades, steps and vases with Palms and Bay-trees. The trellis-work, or pergola, is somewhat similar to the celebrated one at Amalfi, an illustration of which is given on p. 245. It is to be covered with large-leaved vines, and to lead from the main house to the smaller house, which is built for the use of members of the family.

From the main house a flight of steps leads to the dock, which is placed at an angle to suit the channel, permitting the landing of passengers from a large yacht directly at the dock. On the upper landing a semicircular seat, surrounded by columns and covered with a trellis of vines, forms a half-way resting-place. A pavilion which overhangs the rocks overlooks the tennis-court on the land side.

The boat-house, in the hollow, is the dining-room of the old hotel, moved down and altered for the purpose. The terraces and walls along the trellis and the east and south sides of the house are the old foundation walls of the Indian Harbor Hotel, restored and altered as to details and crowned with balustrades and other features. A picturesque path leads from the stone seat at the entrance, along the water edge and along the trellis-work, down over the rocks, all around the property, following the water's edge. Between the stable and the mainland about five acres of land have been made by building bulkheads and dredging the landlocked harbor, so as to permit of its use for the anchoring of yachts. These five acres of made land will eventually be used, in part for vegetable and flower gardens, and in part for grazing lands; a small farm is located in the woods north of the made land. East of the stable, on the bulkhead that has been constructed to reclaim the land, a large coal and ice house, engine house and repair shops have been provided, as well as a dock which will permit a large yacht to be laid alongside it during the winter in a perfectly landlocked harbor.

In carrying out the details of the scheme much blasting for cellars and other features was required, furnishing practically all of the stone needed, not only for the foundation

of the buildings, but for sea walls, roads and much of the filling, so that in altering the profiles of the land little or no extra material was required beyond soil and dirt filling for the top surface. Where masses of large trees were needed holes were blasted in the rock, which is naturally full of fissures, and were filled with soil, in which the trees have been planted.

In this design it has been the endeavor of the architects to make an interesting ensemble of buildings and grounds in a ground plan studied from the artistic point of view. The forms are irregular, and as unbalanced as the letter L, yet with symmetry and circulation such as they hope will give interesting vistas in every direction. A good plan of house and grounds, as seen on paper, aside from the questions of arrangement, has proportion, form, scale, color, values and character. The drawing of such a plan will awaken as much enthusiasm in the educated architect as does the picture in the painter or the statue in the sculptor. This plan should be thoroughly studied and practically finished before the architect has more than a vague idea of the design of the exterior of the building. The plan involves and determines the entire composition; the silhouette or outline of the whole is really projected on the plane of this drawing. If the relations to each other of roads, paths, buildings and other features are well studied and look well on paper, they are almost sure to prove successful when seen in perspective after the work is completed. Such a comprehensive plan does away with the necessity of perspective drawing as a help to architectural as well as landscape study, and leaves it no place except to explain a building to a layman. The many elevations of the several buildings on Mr. Benedict's place have been evolved from the general scheme, and are the natural expression of the whole plan. No one elevation of the houses would give any idea of the entire scheme, as the greatest interest centres in the general composition of the grounds and relations of the buildings to each other, or what the French call "the plan général." They have a very characteristic name for this portion of the composition, which is the "sauce of the architecture." It is this portion of the design which unites or marries the building with its natural surroundings. Most of the same principles of composition obtain in the planning of this portion of the work, as in the planning of the buildings themselves. The silhouette must make first of all an agreeable ensemble with the silhouette of the buildings.

While the landscape or surroundings should govern the general composition of the building in the beginning, the building should in turn, when completed, influence and govern the arrangement and composition of that portion of the landscape work which comes in immediate contact with it. This landscape work is to surround and support the building, serving both as frame and as pedestal. The accessories of the architecture, such as the terraces, balustrades, paths, fountains, open spaces and vistas which come nearest to the building, and other architectural features, are really a part of the building. While the plan of the surroundings does not need to repeat the form of the building itself, it should everywhere recall its principal axis and lines, and it should accentuate its general silhouette, just as where there is a pavilion or important feature in the building there should be a circulation in the surroundings leading up to it. Fountains, balustrades, statues, and rows of trees, when desired, should be clearly indicated in plan. All these things, with the plan of the building itself, should hold together in one ensemble, while there may be interesting details in the form of niches in the verdure for statues, or recesses for seats, or vases, and small round or square breaks taken off the angles where two paths meet. All these forms should be studied almost exactly in the same way as if they were in the plan of the building itself.

The day is coming when the public and honest critics will demand of design in architecture and landscape something more than mere taste and refinement of details—something more than a house planted in the landscape without design, or roads winding in meaningless curves through scattered trees, without unity—and this can be only when the plan is looked upon as something more than merely a question of convenient arrangement, and the picturesque as something more than an eccentric accumulation of accidentals and good details.

New York. *Thomas Haslings.*

Pinus muricata.

THE characteristic Pine of the Mendocino coast region is Pinus muricata, which here fills the place which farther south is occupied by the kindred Monterey Pine, P. insignis. A hardy adaptable tree it is, making the best of all conditions, and only asking to be near its beloved sea. Hanging to the sides of the steep ocean bluffs, where the spray dashes, its growth is all on one side and horizontal. Standing on the bold headlands in groves, the wind scarred veterans on the outside bend from the wind and protect the inner ranks, while within the sheltered park-like areas the favored trees develop into symmetrical and beautiful dark-leaved specimens. Standing alone on some wind-swept point, tall, gnarled and picturesque, the growth one-sided, with only a single living limb perhaps, and this one reaching out horizontally for a long distance and terminating with a dense tuft of green leaves, while the dead limbs are decorated with the cones of years, the tree is always in keeping with its rugged surroundings.

At Fort Bragg, Pinus muricata covers the sandy plains with a dense wood of straight slender trunks, the weaker dying out and leaving finally open deeply shaded groves carpeted with leaves, and the trees fifty or sixty feet high. All the oceanward slopes of this high rocky coast were once, with few exceptions, covered with forests of this Pine, but it has had to give way to green fields and gardens. It makes good lumber, but the supply far exceeds the demand, and each year sees large areas of pine woods chopped down, and in the fall fire sweeps through the tangled mass of limbs, vines and underbrush, and makes way for the plow.

Back from the coast a mile or two, where once the Redwood held sway, this Pine appears as a hardy colonist; rising from a heavy thicket of bushes of half a dozen sorts, and a network of logs and fallen trees, it disputes the mastery of the upper air with lusty sprouts of Redwood, vigorous descendants of the original occupants, with Fir and Hemlock. In the rich soil of these woods it reaches its best estate, and trees of fine proportions and seventy feet high are not uncommon.

Still farther from the coast in the barrens a hard battle has been waged for ages without material gains to either side. The struggle is for the possession of a poor thin soil, and colony after colony of Pinus muricata, P. contorta and Cupressus Goveniana have occupied the disputed territory for eight or ten years, only to be swept away by the resistless fires. A few groves where underbrush is thinner have managed to hold their own for ages; a few live to form groves of handsome trees perhaps twenty years of age, but more only reach the height of six or eight feet. A little farther back, where the barrens cease and the Redwood forest begins, the last Pine is seen at a distance of less than five miles from the ocean.

The cones of Pinus muricata are very persistent and the seeds are retained in them for many years. The coast is a region of summer fogs, and the sun is seldom hot enough to open the cones, and it oftener happens that they are never opened until a fire furnishes the needed heat, and in sweeping away one wood seeds the soil for another.

The wood is valueless for lumber. If left on the ground it will in a few years fall to pieces of its own weight. As an ornamental tree it should rank high. It is easily transplanted, the foliage is a fine dark green and dense, and it has a good, round-headed form.

Ukiah, Calif. *Carl Purdy.*

INDIAN HARBOR.
FORMER SITE OF INDIAN HARBOR HOTEL.
PROPERTY OF E. C. BENEDICT, ESQ.
GREENWICH, CONN.
CARRÈRE & HASTINGS, ARCHTS. 44 BROADWAY.
N
Scale of Feet.

Foreign Correspondence.

Notes from the Temple Show.

THE chief event of the week has been the great annual exhibition of the Royal Horticultural Society held in the historic gardens of the Temple, within the boundaries of the City of London. Here in these Temple gardens, four centuries ago, grew the famous white and red Roses, the badges of the rival houses of York and Lancaster, where now there is only friendly rivalry among rosarians in displaying the perfect charms of the descendants of these historic Roses.

The gardens are an ideal spot for a large show, but much too small for such a prodigious gathering as this, and, besides, there is no opportunity of making a really effective display with splendid material such as one sees in Paris and Belgium, where the arrangement of exhibits is considered of primary importance. The most brilliant groups of plants become monotonous and insipid if arranged in a flat way unrelieved by foliage, and the true way to arrange a show is to combine as much as possible the color and the greenery in pleasing harmony. This cannot be done well unless the exhibition surface is diversified, as in the permanent show-ground in the Regents Park, where at various places there are raised points from which visitors can obtain a survey of the whole display. This exhibition clearly showed the gradual change that is coming over flower-shows in this country compared with those of a few years ago. Huge pot-plants, laboriously trained and formal in the extreme, have almost disappeared, and their places are taken by more easily grown plants and groups of a miscellaneous description. Prominence is now given to the popular classes of plants, and particularly to Roses, Carnations and hardy perennial flowers, and where a few years ago ten kinds of hardy flowers were shown there are a hundred now. Plantsmen of the old school lament this change, but there is no doubt that popularizing easily grown and beautiful plants has done permanent good to horticulture. There was, however, in this huge exhibition a conspicuous dearth of real novelty both in new plants and flowers and in arrangement.

Among the Orchids, which, perhaps, occupied more space than any other class, were several remarkable novelties, particularly of forms of Cattleyas and Lælias.

The certificated varieties were Cattleya Mossiæ, C. Beatrice, C. Arnoldiana and Charles Ingram, all of exquisite beauty, but not easily described, as they resembled each other, differing only by mottle tints. The two forms of Lælia purpurata named Arthur Wigan and Lewisi were extremely fine, the latter having pure white sepals, with lilac-mauve lip. Of C. speciosissima there was a splendid variety named Ernesti, the flowers much above ordinary size, of a lilac-mauve, with lip spotted and blotched with crimson. Messrs. Linden, of Brussels, showed what was the cynosure of the Orchids. This was an exceptionally large-flowered form of Odontoglossum crispum, named angustrum, with the petals heavily blotched with chocolate-red. Messrs. Low showed another similar form, Lowiæ, and still another named Miss V. Ellis, also with heavily spotted flowers, thirteen on a spike. These were the chief novelties among the collections, but the varieties were numerous.

New Cannas were plentiful, though only one received an award. This was Madame Pichon, of French origin of course, a plant of good dwarf habit. Flowers large, rich yellow, heavily spotted with vermilion. Of the newer sorts shown the best were Progression, Königen Charlotte, L. E. Bailey, Edward Meig, Paul Marquant, and a finer half-dozen could not be selected.

Carnations were in true form and numerous, though, of course, all from under glass. Several varieties were considered worthy of certificates. Two Malmaisons, named Lord Rosebery, deep crimson, very large, and Lady Grimston, creamy white, striped with rose, were the best of a large collection. Of Tree Carnations, the best of the new sorts were Cardinal Wolsey, dark apricot, striped with crimson; Mrs. Hambro, a beautiful pure white; Mephisto, dark crimson; Loveliness, pale pink. These new sorts are real acquisitions.

Roses formed probably the greatest attraction of the show, for, considering the early date, they were splendidly grown, huge specimens trained in a globular way so as to travel without injury. Our Rose growers seem now to have become more successful with early Roses than formerly. Perhaps they have taken hints from American growers, but certain it is that we get forced Tea Roses in March, April and May that are superior to those grown in the open in July. The now widely known Crimson Rambler was shown, forced into bloom, as it will not be in flower outside for a week or more. It is a very showy Rose, though it does not last long in bloom. A new Rose, quite as fine for the garden and much earlier, is Paul's Carmine Pillar Rose, a single-flowered variety, of the color of the old General Jacqueminot.

The pot Roses that seemed particularly fine for forcing were Caroline Testout, Mrs. J. Laing, Duke of York, Ulrich Brunner and Madame de Watteville. There was one new Rose certificated, named Grand Duke A. de Luxembourg, from Messrs. W. Paul—a fine globular flower, pale pink, flushed outside with a deeper tint.

Foliage plants included a few good novelties, and some of these were certificated. Of Palms there were Phœnix Rœbelini, a small-growing Date Palm, with slender recurving leaves, and a fine decorative plant. Calamus ciliaris, an old Palm shown by Messrs. Sander to illustrate how fine it is in a small seedling state for table decoration, a purpose to which it is put throughout India. It is a capital Palm for decorative florists, as it is easily raised from seeds and the old plants can thus be replaced. Among the new Ferns, Adiantum lineatum, from Monsieur Linden, is likely to prove a useful addition to decorative kinds. It is a dwarf, compact grower, the deep green fronds streaked with silvery pencilings. It reminds one of A. macrophyllum in size and form of fronds. Pteris Boultoni, a form of the variable P. serrulata, is also fine for room decoration. Davallia Truffautiana is an exceptionally distinct species with a tendency to form a stem. It has gracefully arching fronds and is very handsome.

Caladiums were among the brightest features in the show, and, although easily grown, they obtained a great deal of admiration from those who appreciate finely grown plants. Among several new kinds certificated were Silver Cloud, silvery white and flushed with pink; Duchess of Connaught, green and carmine veinings; Sir Julian Goldsmid, white ground, crimson veins; Duchess of Teck, greenish white and pale rose—four first-rate sorts.

Trees and shrubs are rarely shown well at these exhibitions, the chief among them being Rhododendrons and Azaleas, though there were no conspicuous novelties among these beyond a good variety of Azalea named Diamond, from Messrs. Veitch. This is distinct from any other sort I know. It has rather small flowers, but an abundance of them, of a soft pink, with crimson blotches. It looks like a cross between A. mollis and a Ghent variety. A. Monsieur Desbois was the finest new Mollis variety shown, but it does not eclipse the new Antony Koster for brilliancy of yellow and profusion of flower. A variegated form of Hypericum Moserianum named tricolor was certificated. It is a pretty-leaved sort, but it is doubtful if it will keep its color in the open air. Buddleia Colvillei is a beautiful species, well shown by Mr. Gumbleton from his warm garden at Cork. It is a beautiful shrub with long graceful panicles of rose-pink flowers. It is, unfortunately, too tender for open-air culture about London, but is quite worthy of greenhouse culture. It is from the Himalayas.

Among all the hardy flowers there were but two that were conspicuously new. One was Trollius Caucasicus, Orange Globe, a first-rate variety, eclipsing all others in size of flower and habit of growth; its flowers are two inches across, of a bright orange-yellow, like those of T. Japonicus.

The other novelty was the double form of the Welsh Poppy, with flowers about the size and form of the double-flowered Kerria Japonica and of a rich orange-yellow, originated with and shown by Messrs. Backhouse, of York. After it has been got out of its nursery stage it will prove a first-rate showy hardy flower.

Kew. *William Goldring.*

Plant Notes.

SPANISH IRISES.—The great masses of hybrid German Irises which have lately filled the garden with color are now missed, but an easy consolation may be found in the Spanish Irises, which so closely succeed them. There are a brilliancy and a clearness of color about these bulbous Irises which have always made them favorites. In fact, they are so well known by gardeners that it would seem superfluous to say anything about them were it not for the fact that even the most common flowers seem to be unknown to many gardens. Briefly, it may be said that these Irises have narrow claws and standards and possess a wide range of coloring in whites, yellows, blues, browns and their combinations. The bulbs, which are inexpensive, should be ordered with the Dutch bulbs, preferably in named kinds. They are perfectly hardy and need no protection in this latitude. They show foliage above ground during the winter when the season is at all open. The special care required is to keep them moist while growing, as otherwise they are likely not to flower.

IRIS LORTETI.—This has been the latest of the Oncocyclus section in flower this season. This Palestine Iris is by some considered the most beautiful flower of the family, and is certainly charming, both in form and coloring. It may be briefly, if crudely, described as a pink I. Susiana, though there are said to be forms with violet markings. As it is now flowering with Mr. Gerard, the flowers resemble good forms of I. Susiana, both in size and form. The large standards are white, with many pink lines. The falls are dotted with pink and have a deep rose signal. The styles are tinted a shining golden brown. This species, though recently introduced, is now obtainable at a moderate price and should be grown by all fanciers of choice plants. If the rhizomes are kept in dry soil until late in the autumn and planted out after the ground becomes cold there should be no care required in their cultivation beyond keeping the soil moist during the growing season, which soon ends. It is better to plant them in the open garden rather than in a sheltered place, where the supply of moisture early in the year may prove insufficient.

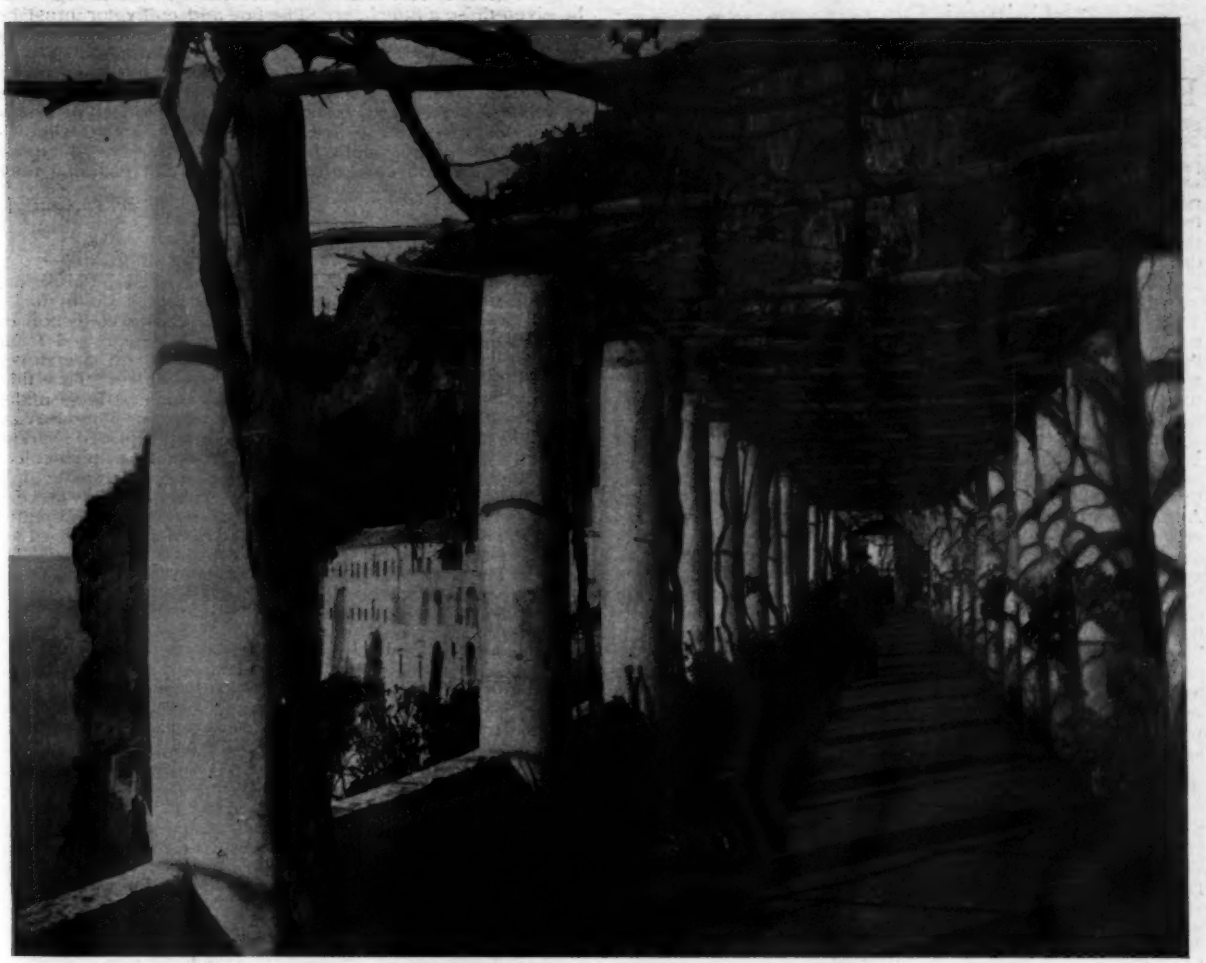

Fig. 35.—Pergola at Amalfi, Italy.—See page 241.

ROSA WATSONII.—The leaflets of this Rose are either three or five on each leaf, long and narrow, none of them being much more than two lines in breadth. The most peculiar feature of the plant is the coloring of the leaf. The ground color is greenish yellow, the veins being marked with deep green, forming hieroglyphic-looking characters along the margins, and these markings are more pronounced when the plant is grown indoors. It

forms a neat little bush and seems to be entirely hardy. The flowers are exceedingly small, but little more than half an inch across when fully expanded. The color is white or pinkish white.

Campanula persicifolia grandiflora.—The Peach-leaved Bellflowers have been favorites in gardens for many decades, especially the white forms. Mr. Backhouse has recently introduced a specially fine form with extra-large flowers of perfect purity of color. The plants are hardy perennials. They are readily increased and bloom profusely at this season. This is one of the most attractive recent introductions in hardy plants, and its neatness of habit is by no means universal among hardy perennials.

Cultural Department.

Flower Garden Notes.

RECENT copious rains have been of great benefit to the flower garden, and all bedding-plants as well as hardy perennials are now growing luxuriantly. Seldom, at this season of the year, have lawns looked more fresh and flowering plants been more thrifty. Tender plants are now becoming well established, and the beds will require hoeing after heavy rains to loosen the surface. Dead trusses should be removed from Geraniums, and Coleus, Alternanthera, Stevia, Achyranthes and other foliage plants be pinched once a week. During dry weather we give our beds a thorough soaking once in four days with a sprinkler, and continue this until the plants have grown sufficiently to cover most of the space allotted to them. Tuberous Begonias flourish in a moist shady location; they can scarcely be overwatered, and a mulching of fine rotten manure is beneficial. Any bedding-plants left over should be planted out, given away or thrown on the rubbish-pile. On many places a few plants are seen dotted here and there in the houses or frames, a useless claim on space and labor.

Perennial borders are at their best during the month of June. Pæonies, Papaver orientale, Aquilegias, Iris Hispanica and I. Germanica, Pyrethrums, some of the Campanulas, the double-flowered Lychnis viscaria, Heuchera sanguinea, Anthericums, Hemerocallis, Dictamnus and Thalictrums are now at their best. Biennials, including Canterbury Bells, Sweet Williams and Rockets, are a mass of bloom. Antirrhinums, wintered in a cold frame and planted out in April, are just commencing to flower, and continue to do so most of the summer; they are among the most beautiful and useful plants for the mixed border. Seeds sown in March yield nice flowering plants by July and August. A good many of the later-growing perennials will now require staking; if left unsupported too long the plants are liable to break or the stems to be twisted, when it is difficult to tie them up neatly. Delphiniums which are now flowering should be securely staked, as winds and heavy rains break them down badly. Weeds grow rapidly during weather such as we are now having, and many of them will have to be removed by hand.

Early Stocks are now in flower. A later batch has just been planted out, and we usually sow the last lot about the end of June, and this provides a succession of flowers until October. We make several sowings of Asters during the season, using Dwarf Chrysanthemum, Dwarf Victoria and the Pompone varieties for the last sowing at the end of June. The earliest lot of Queen of the Earlies and Comet, which commence to flower about the middle of July, are now growing strongly. Liquid-manure is applied when they commence to branch out. Sweet Peas sown out-of-doors commenced to flower here the first week in June. The trenches they are sown in are three or four inches below the level of the ground, so that the plants may be more thoroughly soaked with water during dry weather; we have recently mulched about the rows with spent mushroom-manure, to keep the roots cool and moist. Hybrid Perpetual Roses have commenced to bloom fully a week earlier than usual, and will be at their best by the middle of June. They have made extra growth this season, and have so far not been attacked by rose-bugs or any other pest. We give our beds a dressing of green cow-manure early in May and the sprinkler is allowed to run on the beds during dry weather. Only by adopting such means can we obtain really satisfactory blooms. Although the past winter was severe on flowering shrubs and killed back Deutzias, Weigelias and some of the Spiræas, Roses came through safely. The new Crimson Rambler proved to be one of the hardiest, standing out almost unprotected and being killed back but little. Our last planting of Gladioli is not made until the first week of July. We thus have a succession of bloom from July until October. Those planted last do not furnish as fine spikes nor mature as good bulbs as the earlier ones, but Gladioli are so cheap and increase so rapidly that this need be no drawback to late planting. We find Gladioli specially useful for decorative purposes in September and October, when many other flowers have a rather disheveled appearance.

Carnations grown for summer flowering will soon require staking to keep the flowers clean. Some of our plants are already in bloom. The stock being grown for winter flowering needs looking over once a week to insure necessary stopping. The plants are growing unusually well this season, the showery weather having suited them to a nicety. We use the hoe or hand cultivator to free the soil after every rainfall. Violets which were not planted out this year until toward the end of May, owing to rainless weather, are now commencing to grow nicely. A mulching of pulverized rotted manure will be given these a little later. The hoe and cultivator must be in frequent use at this season. Weeds and insect pests can only be kept under by unceasing care and watchfulness. Weeds exhaust nourishment from the soil needed by other plants and are an eyesore. There are few places where thorough cleanliness is observed, in some cases owing to lack of assistants to do the work, or to the employment of men whose knowledge of gardening is slight, but who work cheaply. But more frequently those in charge are at fault in not planning their work properly.

Taunton, Mass. *W. N. Craig.*

Choice Perennials.

VERBASCUM OLYMPICUM is the finest of all the Mulleins, and as it is perfectly hardy in this locality it ought to be grown in every garden where there is a choice collection of perennial plants. The plants grown here were raised from seed two years ago and are flowering now for the first time, and only the strongest plants have blossomed. This fine Mullein is easily raised from seed, and the seedlings make large strong plants the first year, with vigorous long leaves. In spring the leaves of the previous year are replaced by new ones; they are distinct and conspicuous and of a whitish color. The leaves are revolute, broad lanceolate, acuminate and woolly, measuring from twelve to eighteen inches. The flowers are bright yellow and measure more than one inch in diameter. The stout, erect flower-stems are from four to five feet high and are branched from near the base like a candelabrum. The plant is exceedingly showy and can be seen from a considerable distance. It is grown in the border here in an open position and in deep rich soil. I think it would make a good rock-garden plant where large plants are needed in a high open position. It is a native of the Levant and was introduced from there in 1883.

Another Mullein which I received last fall from Rae Brothers, Norwood, Massachusetts, under the name of Verbascum pannosum, is now in flower. Before the plants blossom they can hardly be told from those of V. Olympicum, but as the two species are in flower at the same time they are easily compared. The Olympian Mullein is by far the showier plant; nevertheless, V. pannosum is a distinct plant and makes a good perennial. The sulphur-yellow flowers measure over an inch in diameter and are produced in a stout, dense, erect spike.

A little more than a year ago I received seed of Pentstemon glaucus, variety stenosepalus, and raised several dozen plants. They were grown in the nursery-bed all last summer and planted in their permanent places in the fall. It has proved to be one of the most satisfactory Pentstemons we grow. Every plant I set out in the fall lived through the winter and all are blossoming freely now. Any species or variety in this genus that proves hardy and grows satisfactorily is valuable, as so many Pentstemons are not reliable in this climate. This plant grows about fifteen inches high and its leaves are slightly glaucous. The radical leaves are subovate and the cauline ones ovate-lanceolate. The violet-purple flowers are produced in compact panicles and the flower-trusses last for several weeks. P. glaucus is found in the mountains of Colorado and Utah.

The Oriental Poppies, Papaver orientale, have made a gorgeous display for the past two weeks, and many buds have to open yet. My experience with seedlings of this handsome Poppy is that they do not make much of a show until they are three or four years old, because the plants are too small and not able to produce enough blossoms to prolong the display for more than a few days. The plants we depend on for our display of this showy perennial measure more than a yard across and produce a large number of blossoms. Although the individual blossoms are short-lived, one good feature is

that they do not all open at one time. From the time the first blossoms open until the last ones expand is about two weeks, and sometimes longer.

Many species of the genus Allium are not desirable garden plants, but at this time two showy species are blossoming. A. Moly is a European plant with large showy yellow flowers, produced in compact umbels. This bulbous plant is ten to twelve inches high and it is well suited for planting along the front row of the herbaceous border. Another showy species is A. Ostrowskeanum, which has large showy umbels of purplish flowers. Both of the above Alliums are perfectly hardy, and can be obtained in autumn from the bulb dealers. If planted then they will blossom about the end of May or early in June.

Gentiana acaulis is a beautiful little alpine, which has blossomed better here this year than for several past years. There is no plant in the garden, when it is in blossom, that has such pure blue flowers. The flowers are very large, compared with the size of the plant, campanulate in shape, and measure two inches in length. The plants are grown here in a slightly shaded moist spot among pieces of limestone and are protected slightly in winter.

Aster alpinus grows very nicely in our rock garden, where its blue heads of flowers are produced plentifully. It is a dwarf plant from six to eight inches high, and its flower-heads measure two inches across.

Harvard Botanic Garden. *R. Cameron.*

Orchid Notes.

THROUGH the exertions of collectors it is possible to have Orchids in flower abundantly throughout the entire year, and the succession is unbroken in a good representative collection. The durability of the flowers, both on the plants and when cut, makes them especially useful for decorative purposes. The flowers of some species are fugacious, but generally this peculiarity is, if not the result, at least the characteristic that accompanies a powerful odor. The kinds with no perceptible fragrance sometimes last for months in perfect condition.

One of the most useful species at this time is Miltonia vexillaria. It is a temperate-house plant, or one that requires a temperature that does not vary much during the whole year. Hence we grow it in winter in what would be termed a warm house, and in summer the plants are placed in the coolest place possible. While there is considerable variation of temperature between midwinter and midsummer, we have no plants that thrive better or give more satisfaction. Last season we had a plant, one bulb of which produced forty-one flowers, and we learned that this Orchid will sometimes attempt more than it can continue indefinitely, and that the flowers should be thinned so as not to tax the energies of the plant. M. vexillaria comes from a region characterized by daily rainfalls throughout the year. Even in the dry season there are mists and showers. While distributed over a wide range of latitude, from northern Colombia to Ecuador, its altitude is well defined and uniform wherever it occurs, mostly on the western slopes of the Cordilleras. It there has the benefit of the precipitation of moisture-laden winds from the Pacific. This moisture is an important item in the cultivation of the plants, for without it they will speedily be disfigured by thrips. Tobacco stems strewed about the pots will keep this pest away, and they are capital absorbents of moisture as well. After flowering, the plants take a short time to recuperate, and then start to grow in early autumn, when they should be repotted. They should be repotted each year, for owing to the great amount of water they require the compost would be injurious to the plants if allowed to remain more than one year. The growing period lasts throughout the winter, and care must be taken that no checks occur from want of water or insects, or their flowering will be affected unfavorably.

Each year at flowering time Cattleya Gaskelliana proves its superiority. I know of no other Cattleya which makes as fine specimens in so short a time; it does not deteriorate as do some other species. Plants that were purchased less than four years ago in six-inch pots are now in twelve and fourteen inch pans. The leading growths double in number each year, and if care is taken all will flower freely. The fact that some Cattleyas fail to flower at times may often be traced to excessive vigor and insufficient rest or maturing. If C. Gaskelliana for any reason fails to bloom, it is sure to start into a second growth, which must be encouraged liberally until finished. Our climate is apt to induce plants to make this second start, and English cultivators keep their plants dry to check the tendency. This would be ruinous here, as it would weaken the plants. If the plants are encouraged they will usually be well matured by winter, and will then flower well in summer. Our plants failed to bloom well at first, and we were told to put them out-of-doors after the flowering season was past. The coolest and most airy house was chosen instead, and the next and each succeeding year has proved the need of plenty of air for Orchids during the summer months. If C. gigas and C. Gaskelliana flower well this year it will take them so long to become strong and plump that they will not start into growth again before winter. It is an old idea that the greatest factor in making a tree fruitful is to have it bear a crop of fruit. Fruiting checks excessive vigor and immature ripening, and this is true of Orchids as of other plants.

The best time to pot Cattleyas is before they begin to make new roots or when they are making them. There are two well-marked divisions of the genus, from the cultivator's point of view—those that flower directly after growth is completed, as C. labiata, C. gigas, C. Gaskelliana and others; and those that rest for a time before flowering, as C. Trianæ, C. Mendelli and C. Percivalliana. The last-named we repot directly after the flowers are cut, as the plants start to root at once. But with the other division the system is changed, for if we waited to repot until after flowering, many roots would be active and badly injured in the operation. So they are repotted as soon as signs of growth are observed. With C. labiata this often occurs in December. C. Gaskelliana is repotted in January, when the other kinds are also ready, so that all Cattleyas are potted during the winter months, when time can be best given for it to be properly done. Nothing but the best fibre from the roots of Osmunda cinnamomea is used. This material takes years to decompose if used alone, but if moss is added it speedily becomes sour and inert, and when the roots touch it they perish.

Many cultivators are taking up the most interesting work of hybridizing and raising seedlings. It is a fascinating experiment when success attends the work, and not without some profit if conducted on proper lines. There is still ample room for original research for all engaged in the work. It is simple enough until it comes to germinating the seeds. We find the best medium for this purpose is fern-fibre, as already stated, taking care to keep it in a condition bordering on saturation. If the minute barleycorn-like seeds become dry after sowing they will not change to the pleasing little green, pegtop-like, thalloid bodies that denote the first distinct stage of germination. These bodies are even more susceptible to drought than the seeds. I have heard of a successful operator in this work who never sowed seeds on the soil of a valuable plant, and the reason is obvious, for the great amount of moisture necessary to bring about successful germination is enough to injure the plant.

South Lancaster, Mass. *E. O. Orpet.*

Trevesia palmata.—This plant is also called Trevesia Sundaica, and more commonly Gastonia palmata. The leaves are very large, attaining a diameter of two and a half feet. The leaf divisions, instead of being widest at the base, are narrower there than nearer the apex, being contracted at the part where the division takes place, and this gives the leaves a very odd appearance. On an old plant growing in the bed of a cool greenhouse at Washington there are growths twelve feet long, and all their length is clothed with its princely foliage. It is a native of India. T. eminens is also well worth growing. The leaf divisions are more numerous and not quite so broad as in T. palmata, and they do not have the peculiar formation in the leaf divisions of that species. Good-sized specimens can be grown in pots, and they are valuable for veranda decoration in summer or for house decoration in winter. Cuttings from one to two feet long can be rooted in sand if the atmosphere surrounding them is kept moist and at a temperature of at least sixty-five degrees. Stems denuded of the foliage will sprout if treated in the same way as Dracæna canes.

Chinese Dianthus.—I have better success in the cultivation of Chinese Pinks in treating them as annuals than as biennials. My plan is to sow them quite early, say, in the middle of February, and when the seedlings are large enough prick them off, three in a three-inch pot. After a week or two the plants are removed to a frame where they get abundance of air to harden them off and develop a stubby growth. When planted out in well-prepared soil they start growing immediately. By the middle of May numbers of them are in full bloom, and with attention in the way of watering and cultivating during summer they flower constantly and make a display that few annuals surpass. Seeds of the different varieties can be secured in separate packages. Planted near each other they hybridize so easily that the flowers of plants raised from seed the second year show marked variations in color. A batch of plants raised this year from German seed are especially fine. Plants kept over the winter start off well in the spring, but in

a short time they become straggling and flower irregularly, and the flowering season of the two-year-old plants is shorter than that of fresh plants. Our soil is a stiff clay, and they undoubtedly relish being planted in freshly prepared soil. This year I tried a mulch of rotted manure about the old plants, but it did little good. Most of the kinds set seed freely.

Botanic Garden, Washington, D. C. *G. W. O.*

Correspondence.

Notes from Santa Barbara.

To the Editor of Garden and Forest:

Sir,—Every visitor to Santa Barbara notices the great number of fine specimens of Araucarias, chiefly A. excelsa. The city is becoming famous for these trees, which are well adapted to the climate. Some of these superb trees are a hundred feet in height, and give a very distinguished appearance to the principal streets. Comparatively speaking, the lack of fine Californian species of conifers is quite as striking as the presence of fine exotic species. The coarse and stiff Monterey Cypress, which is more admirable in its native grove at Cypress Point than anywhere else, is far too common in the public squares. There seems to have been a period, about twenty years ago, when many towns in California planted formal, orchard-like blocks of cheap trees, and called them parks, often surrounding them with close-clipped hedges of Cypress. In several such cases I remember that the Monterey Cypress was the only tree planted on a five-acre square; in others the Blue Gum, Eucalyptus globulus, was selected by the Town Council. Santa Barbara's public squares are not so bad as this, but they are distinctly below the high standards set by the taste and skill displayed in its private gardens and nurseries.

Santa Barbara has had the good fortune to possess many citizens of wealth, leisure and love for plants, so that its private collections contain specimens hardly found elsewhere in the United States, as visitors can see by referring to any good handbook of the city or to Dr. Franceschi's interesting pamphlet on the exotic flora of the region, which includes the suburbs of Goleta and Montecito.

Among the choice specimen plants which the visiting botanist would wish to see are the fine Seaforthia elegans on the grounds of Mr. Eddy, and the large Cocos plumosa in the Stevens garden at Montecito. There are also the splendid Damara Pines in Mr. Sawyer's garden. I also noted several large Casuarinas, C. quadrivalis, particularly one at Goleta, and some choice specimens of Ficus macrophylla and F. elastica. At Carpenteria one finds the Ford collection, which includes a great variety of rare deciduous trees. There are weeks of pleasure and profit to the botanist in looking up the fine specimen trees of this district, and probably one could find many not yet catalogued. Nor is there any place in southern California where the ordinary commercial nurseries contain a wider range of plant-life, nor so much that is difficult to find elsewhere.

The grounds of the old Mission are well worth a visit. Ladies are seldom admitted into the enclosed court-yard, but gentlemen, upon request, are usually shown through. The healthfulness of many of the plants within this sheltered square is surprising, and I saw here the finest Araucaria excelsa of its size that I remember to have found anywhere. The court has been photographed more than once, but its quaint, old-fashioned beds, its Ivied walls, its windless quiet and perfect peace all need to be seen to be appreciated. In the old Mission orchard are a few seedling Pear-trees, planted a century ago, and still bearing fruit. The ancient Olives are not doing well; only three or four can long survive. The gentle German priest who showed me around explained that several varieties "were very good, indeed; better than any we can buy." Others were only fit to cook. Eight or ten distinct types of Pears were in the orchard. The best will be grafted at some of the experiment stations, so as to keep alive these old Spanish pioneer varieties.

Niles, Calif. *Charles H. Shinn.*

Notes from West Virginia.

To the Editor of Garden and Forest:

Sir,—The Crimson Rambler is among the latest Roses to blossom in our garden, and a small specimen set out last year is just opening its flower-buds. Planted in a wild part of the garden in ordinary soil and left untended it has made satisfactory growth, and is a pleasing addition to the Wilderness, as we call the rock-brake over which it scrambles. Rosa Wichuraiana is even later in blossoming, but is now in bud.

Frequent heavy rains have marred the beauty of the Roses and beaten down the heavy-headed Pæonies, which are near the end of their flowering, though a few Chinese Pæonies are still in bloom. But few shrubs are in flower now. Weigelias and some Deutzias are past their prime. The Golden Elder and the common Wild Elder are showy now, the former coming into blossom a week earlier. The flowers of Opulaster opulifolia aurea have faded, and are succeeded by interesting clusters of dull red carpels, which are no less attractive and contrast well with the golden-yellow of its foliage. Oak-leaved Hydrangeas will soon be in flower, and these symmetrical, well-rounded shrubs, with their large handsome foliage and bold balls of flowers, are showy for several months. A group of small shrubs composed of Itea Virginica and Ceanothus Americanus, or New Jersey Tea, is now in flower. These plants are visited by rose-bugs, but the pests are less numerous than usual, perhaps owing to the frequent rains.

The borders are gay with Sweet Williams, Snapdragons, Petunias and Linarias. A beautiful white Pentstemon forms a large clump in the rock-garden, and has been blooming for some time. Groups of Astilbe Japonica are attractive now, flowering more profusely than usual. These Astilbes seem to need much moisture, as they do well only in wet seasons at Rose Brake. Rockets, or Dame's Violets, are still in bloom, and Hollyhocks and Yuccas are opening their flowers. Madonna Lilies, planted in a large group where they have been undisturbed for years, have thrown up numerous flower-stalks, and every stalk has many buds. They form a fine group against the background of Deutzias, and are now the most conspicuous feature of the lawn.

Shepherdstown, W. Va. *Danske Dandridge.*

Azaleas at Brookline.

To the Editor of Garden and Forest:

Sir,—From the middle of May until the middle of June there is a grand show of Indian Azaleas under canvas on the grounds of Professor Sargent, Brookline, Massachusetts. As soon as the first plants begin to go out of bloom, others, retarded in deep shaded pits, take their place, so that the exhibit is always fresh-looking. It is, without doubt, the finest collection in the country. From a limited number of privileged visitors a few years ago thousands of persons now enjoy this remarkable collection annually. The plants have been exhibited in superb condition for several years past, and this uniform success is attributed to the system of cultivation practiced here. As the treatment accorded the plants immediately after the flowering season has much to do with success or failure, it may not be out of place to review the methods of cultivation at this time.

As soon as the plants return from the exhibition tent they are trimmed of all dead flowers, weak shoots, and otherwise pruned into shape. They are then turned out of the pots, all loose soil shaken off, and the original ball of earth combed over with a rake used for this purpose. This is done every season, and the plants do not form any considerable quantity of roots during the winter, which is, in fact, their resting season. The system of potting in the autumn places the plants in better shape for convenient handling during the remainder of the season. This treatment is too radical for most gardeners, and few, even in the immediate vicinity, can be persuaded to follow it. With success by continuous pot culture they are satisfied to continue old methods. After a thorough dressing over the plants are transferred to a specially prepared piece of ground, in which at least one-third of good leaf soil and a little sand has been well composted. The soil is carefully compacted about the plant, so that the new soil and the old ball of earth are a solid mass. It is essential that the density should be uniform and kept so, and the plants are repeatedly examined during the summer to see that the soil is kept firm about the ball. If the soil is loose water will run over it and pass into the ground around the ball, so that while the surface may appear moist for a time, it is, in fact, dry an inch or two below. To see that the plants are never dry is the important part of their summer cultivation.

Where all are beautiful it is scarcely necessary to describe the many varieties in detail, and there are many seedlings as handsome as the best named varieties. There is a fine old plant of the flesh-tinted verschaffelti; other distinct sorts are Countess de Chambord, blush white; E. Mazel, vermilion; Decora, reddish pink; Iveryana, a perfect sheet of tinted white; Bride, white; Criterion, blush; Exquisite, pink. Worthy of special note are several large plants of the handsome climber, Trachelospermum jasminoides, trained on pyramidal wire shapes. These are stood in prominent positions about the entrance porches.

Wellesley, Mass. *T. D. Hatfield.*

Notes from Southern California.

To the Editor of GARDEN AND FOREST:

Sir,—The beautiful "Mariposa Lilies" seem more delightful and satisfying each year. In a former letter I mentioned Calochortus Catalinæ as being in bloom. Following this came C. luteus and its varieties. I have recently seen a bed of these in cultivation here; the flowers were larger and more abundant than on plants in a wild state, and suggested choice yellow garden Tulips on a branched stalk. Some of the blooms when opened flat measured four inches across. They were of a rich yellow color, with yellow hairs and brown markings in the centre. One particular plant bore flowers of an old-gold shade. The plants were from fifteen to twenty-four inches high and sent out scattering branches from the ground upward, with one to two flowers open at a time on each branch. If this family of bulbous plants could be successfully grown in the eastern states it would certainly be a great gain there.

Romneya Coulteri is now in bloom in my garden. The first flowers are generally the largest of the season. I have just measured one which is six and three-fourths inches across; its snow-white petals are beautifully crisped throughout their entire surface. The stalks are seven feet high and of this season's growth.

Inga pulcherrima was often found in mixed collections of greenhouse plants in the Atlantic states twenty years ago. Eight years ago I planted it in my garden here, and it is now a fine specimen some seven feet high. During April it made a gorgeous show, being clothed from top to bottom with its brilliant scarlet flowers, in form resembling an upright tassel of silken threads. It also flowers somewhat sparingly during the summer and autumn.

Los Angeles, Calif. *E. D. Sturtevant.*

Recent Publications.

The White Pine: a Study, with Tables of Volume and Yield. By Gifford Pinchot and Henry S. Graves. New York: The Century Co., 1896.

We welcome the appearance of this little book as a sign that, beyond the general interest of laymen in forestry matters, there is supposed to exist now sufficient interest in the technical side of forestry to warrant such entirely technical discussion as the one before us. The lumber business has relied hitherto, and, no doubt, will continue for some time to rely, upon the crudest exploitation or cutting over of the virgin woodlands, without any idea of devoting time or money or thought to their treatment as continuous crop producers. As long as virgin supplies exist that may readily be made accessible, the incentive to a change of this method will be small. We believe, however, that with the exhaustion of the bulk of the White Pine—the great staple of our lumber market—which is threatened in the near future, an awakening to the needs and the possibilities of forest production as a business may be looked for, when information of this nature will be sought after more eagerly; and the booklet may serve to stimulate inquiry in that direction.

Hitherto efforts to gather such knowledge have been confined to official agencies, and it is, therefore, a further ground for gratification that private interest could be induced to furnish the funds for such an investigation. Although the little duodecimo contains not more than 102 pages, widely printed and margined, the construction of the tables it contains represents an amount of labor which no one who has not had to do with similar work can fully realize. We cannot, however, admit that this is the "first systematic description of the growth of a North American tree" in view of the published reports by the New York, New Hampshire and Maine Forest Commissions, which treat more or less exhaustively of the growth of the Spruce, albeit in a different manner and in some respects less, yet in other respects much more satisfactorily. Nevertheless, this is a commendable effort of two young American foresters to apply their knowledge of European forestry methods to the study of one of our most important timber trees. And even if nothing more is gained than to make clear the point of view from which the questions of technical forest management and forest finance must be approached and the manner of obtaining the basis for it, the authors and publishers will have done good service to the cause of forestry.

In silvicultural direction the contents are rather scanty, the main importance evidently having been laid on the question of the rate of growth and yield of the White Pine. This is a complicated and difficult problem in the evenly grown European forests under management, much more so in the very uneven conditions of our virgin woods, and much more so than the authors have realized. Although they repeatedly acknowledge the limitations of their opportunities and defects of their methods, they have failed to fully appreciate the extent to which these defects influence their results. They have, indeed, failed to realize the extremely varying character of tree-growth, which makes such wholesale averaging as they have employed entirely unreliable, except with a very large number of data. Hence they are oversanguine when "they confidently believe that they (the results) will be found reliable, not only for the region where they were obtained, but also for other portions of the habitat of the White Pine." In this expectation they will certainly be disappointed, fortunately for the prospects of profitable forestry and of our best crop producer, the White Pine, as we will be able to demonstrate when the much more extensive measurements from many localities collected by the Division of Forestry are published, which will show their results regarding rate of growth twenty-five and even fifty per cent. out of the way.

The data, therefore, may, at best, only be used as approximation to conditions in the region of Pennsylvania, where they were gathered, and for this purpose it would have been desirable if more of the detail of the measurements had been given, from which the reader or the practitioner could have made his own deductions, avoiding the many suppositions which have figured in the construction of the tables, and which, in the absence of the possibility of verification, to some extent shake confidence in their value. In several directions it is impossible to make out exactly what their method has been; it would appear, for instance, that while 160 trees were analyzed, no use was made of these analyses in constructing the curves of rate of growth; these seem to be based on what is called the average tree of the group, which in our uneven stands is a most unreliable basis for standard values.

It would lead us too far to point out in detail the flaws in the procedure, especially as this would require explanations of a technical nature, which our space does not permit at this time. Suffice it to say in general that, while the methods employed may be adequate enough for rapid approximate determination of the contents of a given area, they certainly are not admissible for the establishment of standard tables. The construction of yield tables of normal growth can, indeed, not be done by simply dividing the contents of an imperfect stand by its density, for the trees in a normal stand develop entirely differently, and hence are not, either in the number or diameters, height or volume, proportionate to those of an imperfect stand. The authors owe us, and would find it difficult to furnish, proof, that for any practical or financial purposes, such as the book claims to have been written for, "this method is sufficiently correct."

Nevertheless, while these flaws render the work of less directly applicable value, and do not, as the authors suppose, settle in the main the absolute amounts of the rates of growth and production, the tables illustrate very well the nature of the problem and give an idea of the relative values. They also contain much of interest to the forester and lumberman. The latter will especially welcome those tables which exhibit the percentages of merchantable timber at various ages, the length of lumber, the proportion of sapwood and the contents of standing trees of different diameters.

We are glad that the era of technical forestry literature under private editorship seems to be fairly started by this publication, and hope that our criticisms will only serve to

increase the interest in the same and lead to further efforts in similar directions.

Forestry Division, Washington, D. C. *B. E. Fernow.*

Notes.

On St. Mary's, one of the Scilly islands, whose flower-farms furnish the supplies for the London market, it is reported that 900,000 Narcissus bulbs alone were planted this year. St. Mary's is but nine miles in circumference.

A correspondent of the London *Garden* speaks of the beauty of a mass of Rhododendron Vaseyi which was flowering in the Azalea garden at Kew. When it is remembered that this plant was discovered only ten years ago the record that it has already made on both continents as a good shrub is quite remarkable. There is reason to hope that by hybridizing it with other species a new race of early-flowering Azaleas will be established.

A preliminary meeting of citizens of New York interested in tree-planting in the residence portions of the city was held May 22d, and it was proposed to regularly organize the association and elect officers on Thursday, June 25th, at 3.30 P. M., in the rooms of the Wool Club. Mayor Strong has consented to the use of his name for President, and many well-known citizens have signified their intention to become members. The annual dues of the society will not exceed $5.00, and the receipts will be used to publish pamphlets and in disseminating information to the public on the best methods of planting shade-trees on streets, the best sorts for this purpose, etc. Application for membership may be made to Cornelius B. Mitchell, 64 and 66 White Street, this city.

Peppers, eggplants and muskmelons, grown under glass by students in the Department of Horticulture, Cornell University, were on sale in New York last Saturday, along with the same vegetables grown in the open in southern states. The peppers were extra-large, firm and crisp, and brought seventy-five cents a dozen, those from Florida and Louisiana realizing twenty-five to fifty cents. The melons, while small, were of good substance and excellent flavor, and commanded forty to fifty cents, those from the south bringing fifteen to thirty-five cents each. Owing to the continuous supply of southern eggplants during the winter and spring, their abundance during the past fortnight, and the consequent lack of novelty, the eggplants found almost no demand; those from Florida cost ten to twenty cents each.

Seven hundred and seventy-five members have already enrolled themselves in the Audubon Society established a few weeks ago in Boston and already commended in these columns. The object of the society is to preserve our native birds by discouraging the use of their feathers in personal decoration. Among the vice-presidents of the society are the senior Senator of Massachusetts, the President of the Massachusetts Historical Society, the President of the Massachusetts Society for Promoting Agriculture, and many other well-known citizens and a number of women distinguished for their artistic and social attainments. Any one can become a member of the society by agreeing not to purchase or wear the feathers of wild birds and paying $1.00. The Secretary, to whom all communications should be addressed, is Miss Harriet E. Richards, Boston Society of Natural History, Boston. There are no annual dues.

At the meeting of the General Federation of Women's Clubs recently held in Louisville, Kentucky, the following resolution was adopted: Resolved, that whereas there is nothing of more paramount importance to the welfare of state and nation than the preservation and economic development of our national resources, and whereas it is everywhere apparent that the wicked and wasteful destruction of our forest cover is a direct robbery of these resources and should be checked by every measure both of private endeavor and of legislative enactment, and whereas it is self-evident that if these threatening conditions are realized and public sentiment aroused an incalculable benefit would be conferred on our entire nation, be it resolved that, as federations of women's clubs and as individual clubs, as far as possible we pledge ourselves to take up the study of forest conditions and resources and to further the highest interests of our several states in these respects. This measure, presented by members whose intelligent interest and energy have already definitely furthered forestry work in several states, was ordered printed and circulated among the 1,500 clubs in the Federation in the United States, and it is proposed to follow up this beginning with pamphlets and lectures.

The market for string-beans last week is said to have been the poorest of any in the experience of produce dealers in this city. The enormous quantity of nearly 65,000 packages was received, many of which were barrels. The remarkably low price of thirty to fifty cents a barrel prevailed on Monday, and with stock coming in faster than it could be disposed of from North and South Carolina, Virginia, Maryland and New Jersey, any offer sufficient to cover the cost of freight was accepted later in the week. Twenty to twenty-five cents became the rate for Norfolk shipments, and those from North and South Carolina, less fresh, owing to the longer journey, brought but ten to fifteen cents a barrel, not enough to make good the cost of transportation. Many thousands of barrels were placed in cold storage, but the experiment is hardly likely to prove profitable, as on the first indication of better prices fresh stock will be hurried in from Maryland and New Jersey fields. There is also a surplus of cabbages, cucumbers, tomatoes and other vegetables. This condition is caused by the prolonged drought in the south and consequent delay in the maturing of crops, so that the southern produce is now coming in at the same time with vegetables from near-by states. On last Friday 15,000 bushels of cucumbers reached this city, and these sold for forty to seventy-five cents a bushel. On the same day 7,000 bushels of tomatoes were received, which realized but seventy-five cents a bushel at wholesale.

Red currants, from Maryland, on Saturday sold for fifteen cents a pound, and raspberries, also the first of the season, brought ten cents for a pint of the black fruit and fifteen cents for a cup holding a third of a quart of the more delicate red berries. Huckleberries, from North Carolina, have been quite plentiful, and so have blackberries from the same state and from Maryland and Delaware, costing eighteen cents a quart. Strawberries from Maryland and Delaware are becoming scarce, and some of the best varieties from New Jersey, like the Gandys, have passed out of season. The dry weather in April and early May caused short crops in this state, and most of the berries are small. Some fancy strawberries from Hilton and Irvington-on-the-Hudson were in special demand last Saturday. They were extremely large, of rich color and lustre, and with choice specimens of the variety known as Mary, from Essex County, New Jersey, brought sixty-five to seventy-five cents a quart. Prices ranged from fifteen to twenty cents for small, ordinary fruit, twenty-five to thirty cents being an average price for good fruit. Supplies have been coming from western New York in small lots until last Saturday, when the refrigerator-car service began, insuring a fair supply for this week. Watermelons, from Georgia, are already plentiful and cheap enough to be common on fruit-stands and in greengrocery stores in the poorer sections of the city, and the largest selected melons can be bought for forty to fifty cents. Thirty car-loads arrived here during last week.

We have spoken before of the damage the extreme cold weather in western New York last winter did to fruits. A correspondent of *The Agriculturist*, writing from Genesee County, where there are tens of thousands of trees of the Duchess Pear, says that most of the older dwarf trees escaped with little injury, though many were killed. They flowered, but the bloom was sickly and the pears failed to set. The foliage is now withering and adventitious buds have started out on the large limbs and trunks until they are in some cases almost covered with leaves. Within a year or two past many of these old Duchess trees have been grafted with Clairgeau, which is less liable to disease, but probably seventy-five per cent. of the grafted trees are killed to within two or three inches of the ground. Trees of Bartlett, Howell, Anjou and Seckel show healthy foliage, but are carrying no crop. They have proved their ability, at least, to endure cold that kills the Duchess and Clairgeau. From a half to two-thirds of the Peach-trees of all varieties are dead. Green Gage and German Prunes show a few blossoms, the other varieties not one, while on Coe's Golden Drop, Bavay, and even the old Damson, much of the wood is killed. Half of the trees of the sweet varieties of Cherries are already dead. The old sour Morello bloomed and a small crop set. Among the Grapes, the inferior Clinton is unhurt. Worden, Cottage and Martha are very little injured, while Duchess, Prentiss, Jefferson and Victoria seem dead to the root. A vine of the Lindley, which seems to have been one of the writer's favorites, was destroyed, with the exception of one branch which lay on a roof and was covered with snow. This is now making new wood. Altogether, this shows that fruit which will endure climates where the mercury often falls to ten, and occasionally to fifteen degrees below zero, cannot endure such a degree of cold as thirty degrees below.